

Illawarra zieria

Zieria granulata
Endangered

Target: manage weeds and grazing at three sites, and collect seeds for research

This *Saving our Species* (SoS) project for Illawarra zieria (*Zieria granulata*) focuses on weed control and grazing management at three sites. Plants showed a positive response, with recruitment and presence of juveniles tripling in size across six fixed plots since on-ground management began in spring 2016. In addition, high levels of seedling recruitment were observed following the 2017–19 drought which had caused substantial mortality of adult plants, presenting a positive sign of recovery.

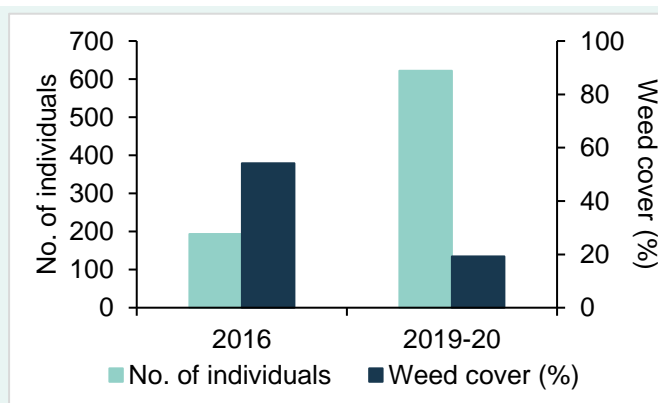
This tall shrub, endemic to the Illawarra region, occurs along volcanic rock outcrops and ridges with a highly restricted range of less than 25 kilometres. It is heavily impacted by browsing from goats, cattle and swamp wallabies; and competition from invasive weeds, particularly lantana which often occurs as dense thickets. By controlling weeds and managing grazing impacts, the zieria has an increased opportunity for seedling recruitment. This management has also had mutual benefits to various nearby threatened ecological communities (TECs) and threatened species and has led to the discovery of new populations of some of these threatened species. Seed collection was also undertaken at the Dunmore Hills site for conservation at the Australian PlantBank, Mount Annan.

Notable outcomes of the project include:

- **tripling** (on average) Illawarra zieria numbers in fixed plots at monitoring sites over the project
- presence of a high number of seedlings after the 2017–19 drought, which is a positive sign of recovery
- managing **55,000 m²** of habitat for weed control.

Trajectory: stable

Recruitment and presence of juveniles have increased, and the reduction of weed cover can be observed since the commencement of this project in spring 2016. However, a proportion of adult plants have been lost due to pre-fire drought and an increasing trend can't be confirmed until the new recruits make it to a mature state.



Partners

This Illawarra zieria project is led by the SoS program in partnership with several stakeholders.

Holcim Australia has contributed funds towards goat control at the Dunmore Hills site and Reflections Holiday Parks (Killalea) has co-contributed with in-kind pest animal control and weed control. Kiama Council has provided in-kind contributions to the removal of weed biomass from the site at Jerrara dam.

The University of Melbourne, and Royal Botanic Gardens Sydney and Victoria have contributed by researching population structure and genetic diversity of Illawarra zieria using leaf tissue samples that were collected as part of this project.

What did we find?

Since the commencement of weed control, the number of Illawarra zieria in six fixed plots has tripled in size. This successful outcome may be attributed to the weed control and browsing management actions, because seedling recruitment for this species has generally been low in the past.

The 2017–19 drought led to the dieback of around 25% of adult plants. However, after the drought a high number of seedlings were present, representing a positive sign of recovery.

The management of weed threats has also benefited nearby TECs and other threatened species (including *Melaleuca armillaris* Tall Shrubland, Illawarra Subtropical Rainforest, white-flowered wax plant, *Solanum celatum* and Illawarra Irene), and led to the discovery of new populations of some of these species.

Animal browsing has had an impact on Illawarra zieria population dynamics at the Dunmore Hills site. As well as pest animal control, tree guard cartons were installed at heavily browsed sites to ensure a proportion of seedlings persist to maturity.

Continued monitoring across the sites will help determine whether population remains stable.



Drought-induced dieback of Illawarra zieria. Photo: Jedda Lemmon/DPIE

Mutual benefits to nearby TECs and threatened species

New records of threatened plants and a new population of Illawarra Irene were discovered in the Dunmore Hills. This discovery extended our knowledge of the species distribution to the east by several kilometres and is the first record of this species in the Dunmore Hills.

Work on Illawarra zieria has had mutual benefits in improving the condition of nearby TECs, in particular, the critically endangered *Melaleuca armillaris* Tall Shrubland community.



A new population and range extension of Illawarra Irene co-occurring with Illawarra zieria within the *Melaleuca armillaris* Tall Shrubland TEC. Photo: Jedda Lemmon/DPIE

Saving our Species is a NSW Government flagship program delivered by the Environment, Energy and Science Group in the Department of Planning, Industry and Environment. To find out more about threatened species in New South Wales and the *Saving our Species* program, visit the [Saving our Species Program webpage](#).